3. Remarks

Claims 6, 7, 20, 22-26, 30-35, 37 and 39-53 are currently pending in the application with claims 6 and 20 being in independent form. Claims 1-5, 8-19, 21 27, 29, 36, and 38 have been previously cancelled without prejudice. Claims 54-56 have been withdrawn as being drawn to a non-elected invention.

Claims 6 and 20 have been amended to specify that the flt3-ligand-derived dendritic cells augment the patient's tumor-specific immune responses (support may be found, for example, in the specification at page 2, left column, paragraph 0012 of the published application). Claim 20 has been amended to specify that the amount of flt3-ligand is sufficient to generate an increase in the number of the patient's dendritic cells (support may be found, for example, in the specification at page 1, right column, paragraph 0007 of the published application).

> 6. A method for augmenting an immune responses in a patient having a cancerous or neoplastic disease, comprising the steps of administering flt3-ligand to the patient in an amount sufficient to generate an increase in the number of the patient's dendritic cells and administering a tumor antigen to the patient, wherein the flt3-ligand-derived dendritic cells augment the patient's tumor-specific immune responses.

> 20. A method of treating cancerous or neoplastic disease in a patient in need thereof comprising administering flt3-ligand to the patient in an amount sufficient to generate an increase in the number of the patient's dendritic cells and administering a tumor antigen to the patient, wherein the flt3-ligand-derived dendritic cells augment the patient's tumor-specific immune responses.

1. 35 U.S.C. §112, first paragraph

Applicants acknowledge that the rejection under 35 U.S.C. §112, first paragraph has been withdrawn.

2. 35 U.S.C. §103(a)

Claims 6, 7, 20, 22-26, 30-35, 37 and 39-53 stand rejected as being unpatentable under 35 U.S.C. §103(a)/§102(a) over *Lyman, et al.* (WO 94/28391) in view of *Elliott, et al.* (USPN 5,478,556), *Srivastava, et al.* (USPN 6,017,544) and *Brem, et al.* (USPN 5,626,862). Applicants acknowledge that the Examiner has clarified that the obviousness rejection is under §103(a)/§102(a) rather than §103(a)/§102(e). Applicants respectfully traverse.

It is the *claimed* invention that must be rendered obvious by the cited art. To establish a *prima facie* case of obviousness, three criteria must be met: First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Lyman teaches that flt3-ligand may be used to treat cancer.

Elliott teaches that GM-CSF and IL-2 may be used in combination with TAAs in a vaccination protocol against cancer. *Elliott* states that the GM-CSF will recruit monocytes and macrophages to the injection site to process and present the TAAs to lymphocytes. *Srivastava* teaches that a stress protein/peptide complex may be administered in combination with a cytokine (including GM-CSF) that enhances the immune response against the tumor for the treatment of cancer. *Brem* discloses polymeric implants for localized delivery and controlled release of chemotherapeutic agents to solid tumors. The implants may be used in conjunction with GM-CSF, which is disclosed as having the capacity to stimulate the growth and activity of myeloid cells that play a critical role in the migration and development of professional antigen presenting cells, such as dendritic cells.

Lyman does not teach that flt3-ligand generates dendritic cells; nor does it teach the administration of flt3-ligand to generate dendritic cells in combination with administering a tumor antigen for the treatment of cancer, wherein the flt3-ligand-derived dendritic cells augment the patient's tumor-specific immune responses.

Elliott, *Srivastava*, and *Brem* do not teach or suggest that flt3-ligand generates dendritic cells or that the flt3-ligand-derived dendritic cells can augment immune responses to tumor antigens.

Thus, a *prima facie* case of obviousness has not been established because the prior art references do not teach or suggest *all the claim limitations*, *i.e.*, that flt3-ligand generates dendritic cells and that the flt3-ligand-derived dendritic cells can augment immune responses to tumor antigens.

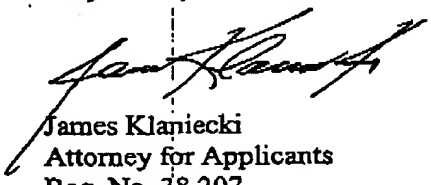
In addition, it is important to note that it was unknown that flt3-ligand had the capacity to generate large numbers of dendritic cells as of the prior art dates of the cited art. It is a given that which was unknown cannot later be considered obvious.

The capacity of flt3-ligand to generate large numbers of dendritic cells and that the flt3-ligand-derived dendritic cells can augment immune responses to tumor antigens was a newly-discovered and unexpected property of flt3-ligand. This unexpected property is part of the claimed invention. The cited art, alone or in combination, do not address this important claim limitation.

Applicants respectfully note that if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Thus, the dependent claims that further comprise administering GM-CSF are also considered nonobvious.

Applicants kindly request allowance of the pending claims. If the Examiner believes that any issues could be addressed by way of a telephone conference, the Examiner is cordially invited to telephone the undersigned.

Respectfully submitted,



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I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on the date indicated below.

Signed: Nanci M. Kertson Date: Oct 12, 2005

Nanci M. Kertson